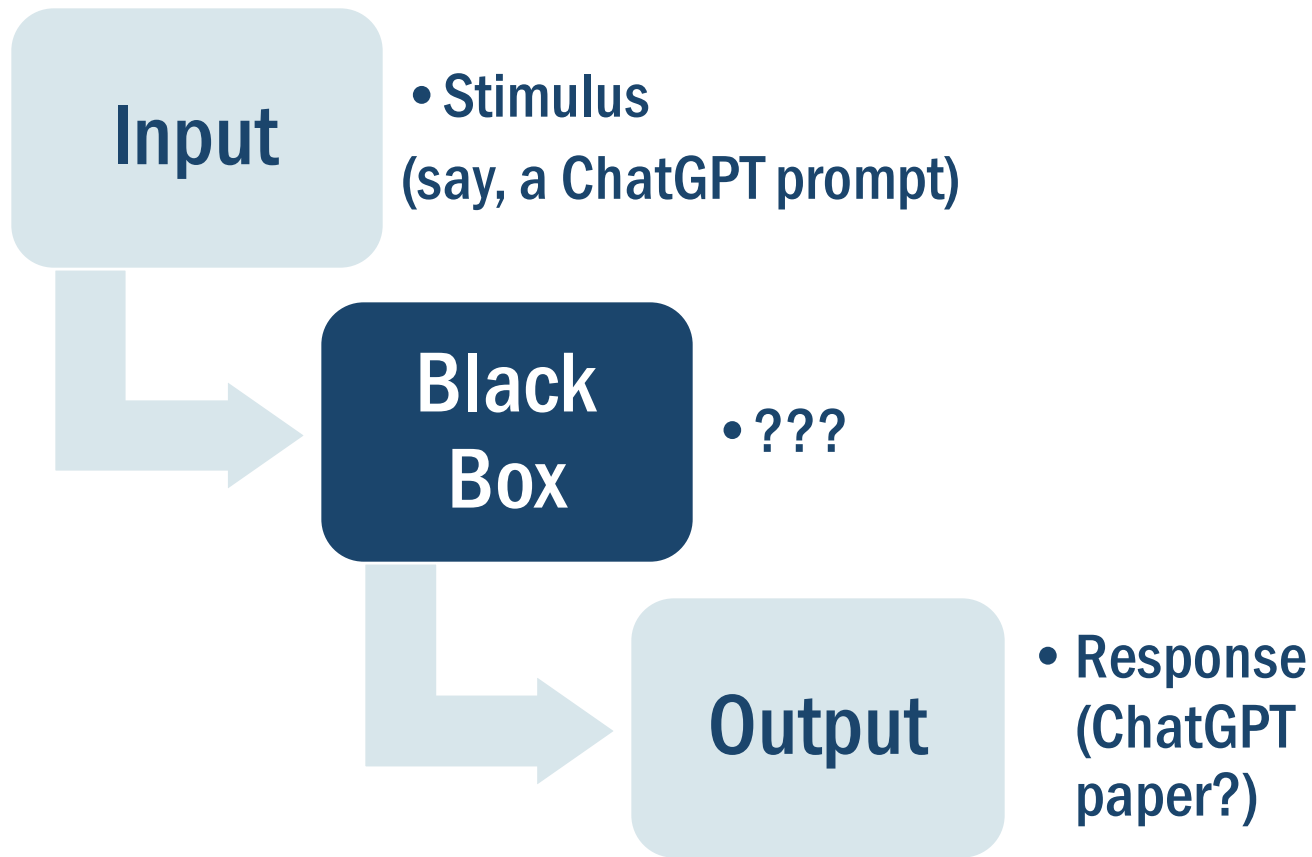


The background of the slide is a photograph of several grey archival boxes stacked on a shelf. Each box has a white label with black text. Some of the visible text on the labels includes "PARTY LEADERSHIP / ADMINISTRATIVE FILES" and "Democratic Party". The boxes are arranged in a row, and the lighting is somewhat dim, creating a sense of a physical archive.

Tool Design as Digital Humanities Research

**“Design-Based History Research” to support digital
humanities scholarship**

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chat.openai.com/chat/52fa4f06-2f0c-49c6-8368-2d7ac90468cb

History Dependence on Software

 Explain why historians should not depend on software too other fields because otherwise the practice of history will programmers' disciplinary priorities and not evidence-bas and continuity over time

 Historians should not solely rely on software tools develop fields because these tools are often created with different While they may be useful in organizing and analyzing data consider the context and nuances of historical events and past. This means that the results generated by these tools evidence or the interpretation of events and patterns over

Archival boxes and computational black boxes



“The” historical method and tool design

THE ==

- **Arguments about change and continuity over time**
- **historiographic conversations with peer historians**

Digital History Methods

- Is there an existing tool/approach that is well suited to the question?
- Are there existing examples of digital history suited to our sources and audience(s)?

Digital History Tool Design

- What if none of the tools align directly with the research question we want to ask?
- What if there are no tools that work with our available sources?

Design Based Research

(Design Based Research Collective, 2003; Anderson & Shattuck, 2012)

Theory-driven development of educational design and methods

- Situated in a real educational context
- Focused on the design and testing of a significant intervention

Applied iterative theory developed with practitioners

- Testing of design and methods shapes revision of theory
- Revised theory offers insight into design and methods revisions
- Emphasizes mixed-methods approaches and collaboration

Impact in both research and practice

- Develops research-driven design theory for use by other researchers
- Provides guidance for adoption by other practitioners



Design Based HISTORY Research

Theory-driven development of educational design and methods

Applied iterative theory developed with practitioners

Impact in both research and practice

Development of tool/methods design to answer question about change and continuity

Refine and iterate design & methods based on resulting historical argument

Impact in both argument-driven history and digital history



Design Based HISTORY Research

Development of tool/methods design to answer question about change and continuity

- Situated in historiography
- Focused on the gaps between historiographic need and existing design and method

Refine and iterate design & methods based on resulting historical argument

- **Small-scale testing to evaluate how tool/method design shape historical argument**
- Revised argument offers insight into design and methods revisions
- Emphasizes mixed-methods approaches through proof-of-concept

Impact in both argument-driven history and digital history

- **Produces tools designed for and by other historians**
- **Articulates methods that link tools to appropriate continuity-and-change questions**
- Contributes to historiography through change/continuity-over-time arguments

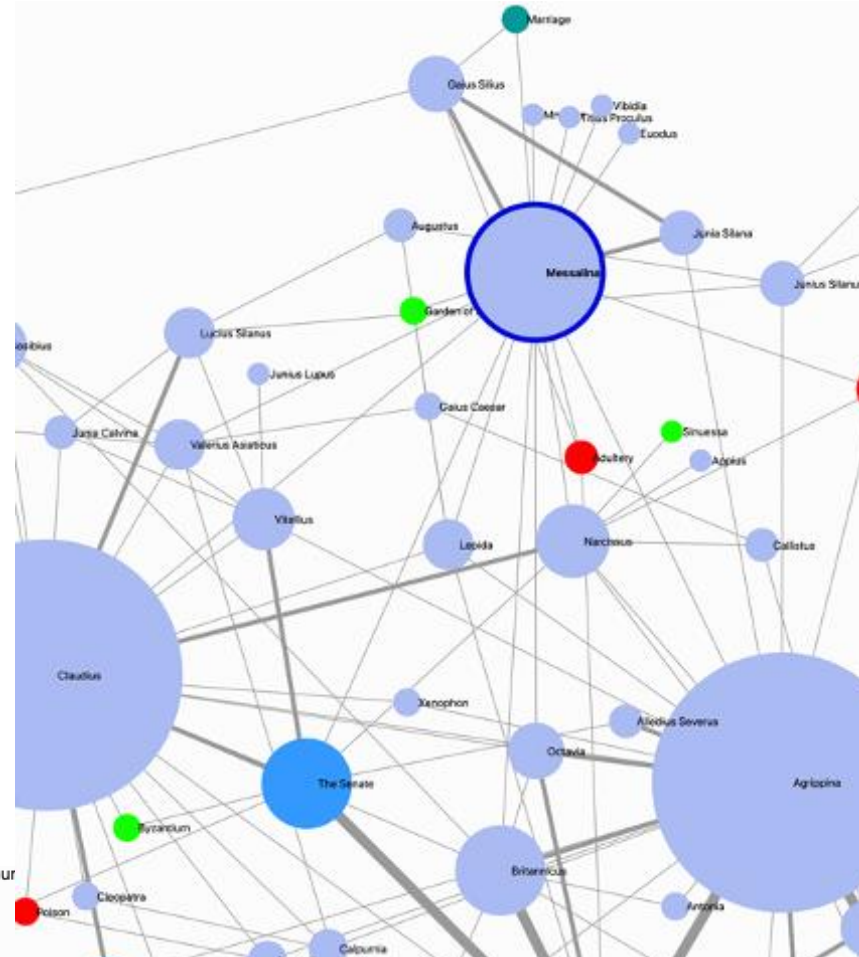


A Case Study: Net.Create

DBHR in network analysis tool design

What are networks?

- Node-edge pair: a single interaction between two historical agents
- Bigger node: more interactions, higher "gravity"
- Network: aggregation of many node-edge pairs



Many node-edge pair interactions let historians see:

- outliers
- Influencers and power brokers
- points of connection between factions in a network

Net.Create

Existing network analysis tools for historians

Network analysis tools built for and by data and computer scientists:

- Can measure centrality and affinity subnetworks and provide off the shelf access to the analysis of very very large networks with expertise
- BUT these measures
 - Struggle to accommodate developing understanding of relationships
 - Don't automatically accommodate citations (or even the names of people, places and things)



Net.Create

Simultaneous collaborative data entry

Historiographic need

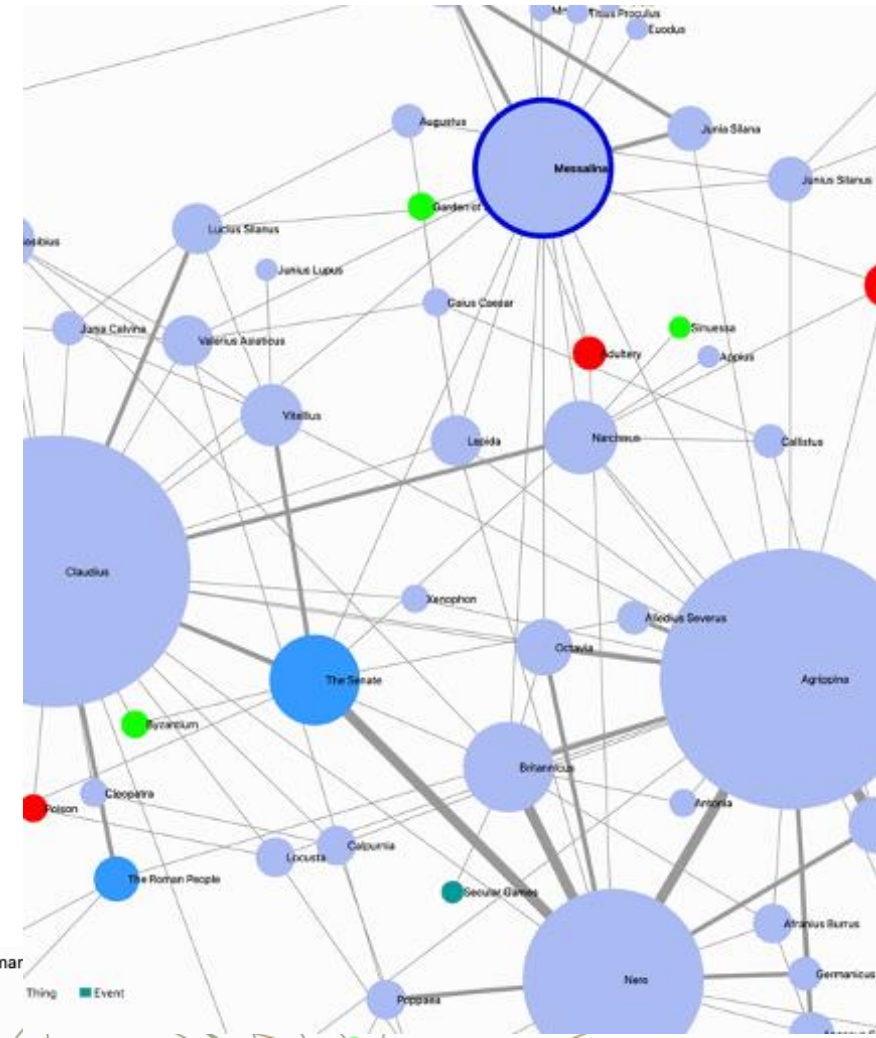
Foster initial debate over who the historical agents are and what role they play

Net.Create Feature

Predictive text and real-time simultaneous data entry from all collaborators, in both textual form and visual form

Theoretical Grounding

Computer Supported Collaborative Learning. How do historians do research together? (Paavola & Hakkarainen, 2005; Barron, 2003)



Net.Create

Citations and notes fields

Historiographic need

Preserve and revise notes and citations, to foster in-depth debate any given node or edge or the sourcing of a historical actor or an

Net.Create Feature

Fields for each node and edge that "travel" with the visualization: sortable citations and open-text notes

Theoretical Grounding

Capta: How do historians extract and interpret evidence, rather than download pre-formed data? (Drucker, 2014)

The screenshot shows a detailed view of an edge in a network visualization. At the top, it says "this node → Octavia". Below that, the edge is identified as "EDGE 346". The "Source" is "Messalina". The "Type" is a dropdown menu set to "participates in". The "Target" is "Political Murder". The "Citation" field contains the number "11.37". The "Significance" field contains the text "Murdered on the orders of Narcissus for adultery." There is a "Close" button in the bottom right corner. Below the main view, there are three more entries: "this node → Valerius Asiaticus", "Claudius → this node", and "Euodus → this node".



Net.Create

Custom fields, tags & filters

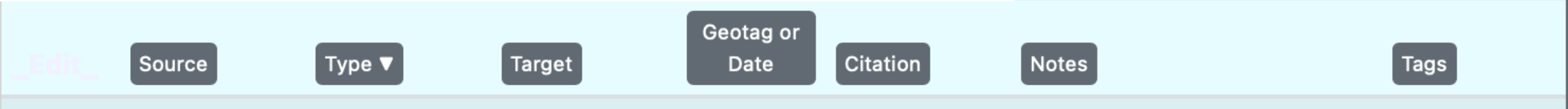
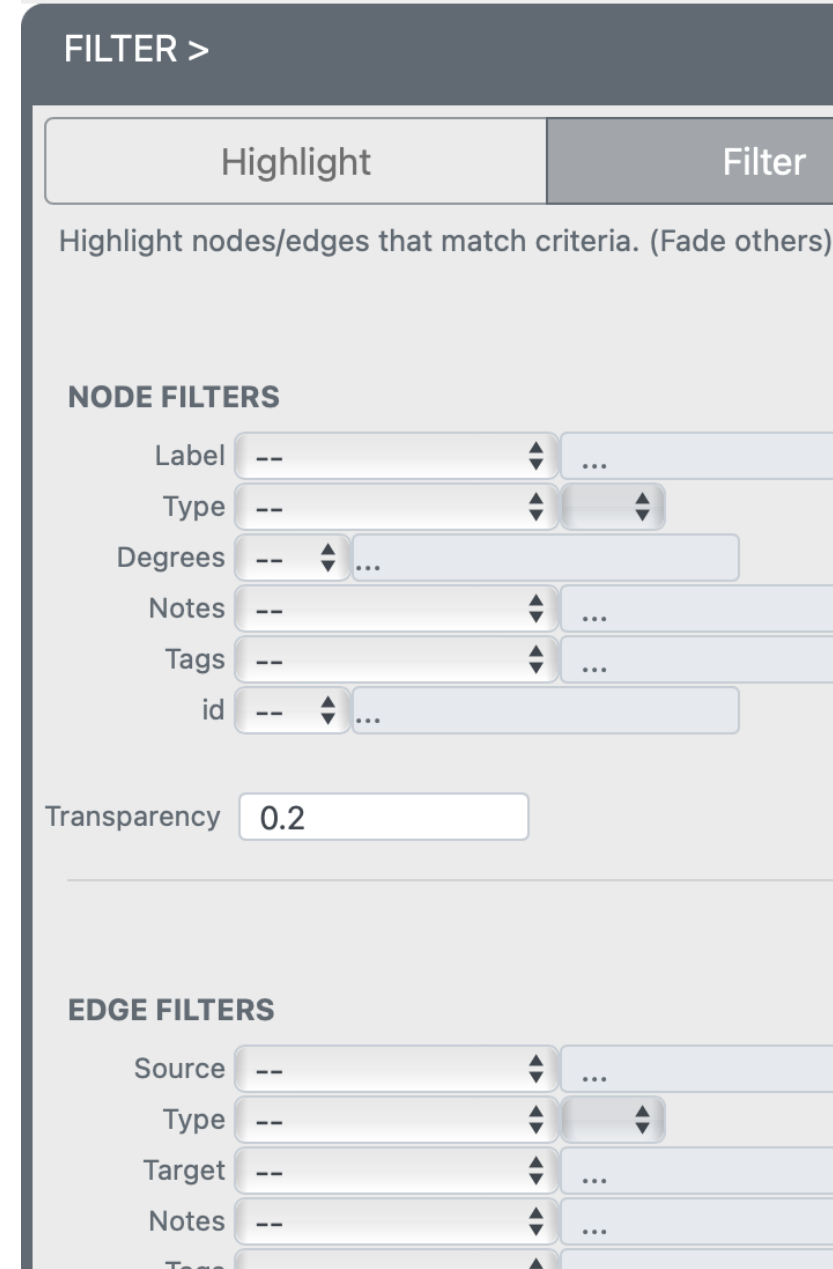
Historiographic need Net.Create Feature

Identify and debate trends, outliers, power brokers and influencers and connect them to other historical analyses.

Flexible fields that can change as needed (times, dates, location, tags, etc.) and provide filtering for easier analysis.

Theoretical Grounding

Activity Theory: How do mediating tools intentionally support research goals, rather than shaping them unintentionally (Danish, 2011; Engestrom, 1987)



Net.Create

Up Next

Historiographic need

Authorial perspective

Net.Create Feature

Provenance of *capta* within Net.Create (e.g. who entered a specific interaction and why?) and researcher notes to each

Who entered this *capta*?



Notes

Tags

Athlete

General family

Athlete

Theoretical Grounding

Researcher positionality: How does the researcher's own positionality shape their interpretation and how do we negotiate that? (Geertz, Solberg)



Net.Create AS humanities research

Revisions, peer review & DBHR impact

Date	Version	Design	History Need	Collaboration
2015	0.01	Network data entry with citations	Citation, significance and context	Solo coding, UI, feature design, testing/user-activity design
2016	0.02	Simultaneous data entry	Collaboration	
2017	0.03	Customized notes and location fields	Dates and times	
2018	1.0	Live visualization & predictive text	Disambiguation of historical agents	Personally directed UI, feature design, documentation and research use. Collaborated on testing/user-activity design, coding.
2020	1.1, 1.2	Custom tags	Tracking and visualizing change & continuity	
2022	1.3, 1.4	Filtering, node/edge type changes, import/export		

- **6 DBHR revisions since 2015, with**

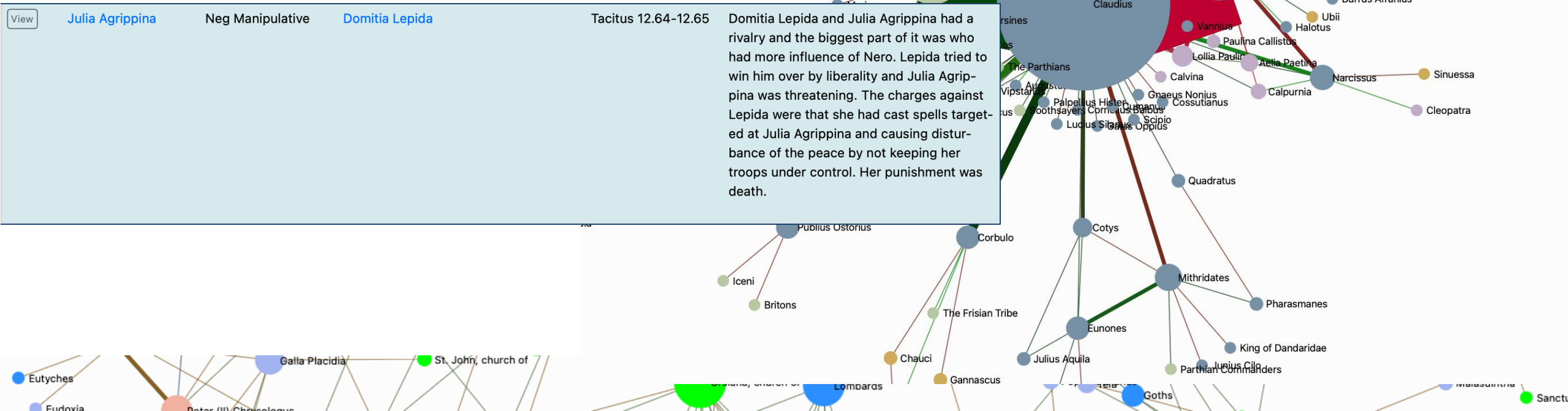
- 2 peer-reviewed articles
- 2 competitive grants
- 75+ workshops, user focus groups & classrooms

- **15+ independent humanities research projects in 2021 and 2022**



Net.Create as a platform for humanities research

The distribution of women's influence in the late Roman Imperial world



View [Julia Agrippina](#) Neg Manipulative [Domitia Lepida](#) Tacitus 12.64-12.65

Domitia Lepida and Julia Agrippina had a rivalry and the biggest part of it was who had more influence of Nero. Lepida tried to win him over by liberality and Julia Agrippina was threatening. The charges against Lepida were that she had cast spells targeted at Julia Agrippina and causing disturbance of the peace by not keeping her troops under control. Her punishment was death.

Opportunities for Design Based History Research

- **Digital tools designed for the entire discipline**, designed by historians for historians not just to support, but to encourage, sound historical methods
- **Integration of tool and methods design for the future**, so that historians working both collaboratively and alone don't need to reinvent the wheel for each new interdisciplinary method that seems promising
- Models for argument-driven digital history that offer frameworks for **assessing existing digital tools based in historiographic principles**



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